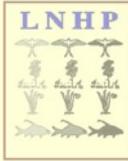


LOUISIANA NATURAL AREAS REGISTRY

Quarterly Newsletter

December 2008

Volume 6 Number 2 of 4



Working with landowners towards conservation of Louisiana's ecologically sensitive lands

<http://www.Louisiana.gov/experience/naturalheritage/naturalareasregistry/>

Can you name the bird that laid these eggs in the above photo? See page 6 for answer.

Natural Areas Site Provides Habitat for Endangered Plant

Two Natural Areas landowners in St. Tammany Parish helped the Louisiana Natural Heritage Program (LNHP) by providing stream bank habitat for the endangered Louisiana quillwort (*Isoetes louisianensis*). On Oct. 23 LNHP staff and its partners transplanted some federally endangered quillwort plants that had been moved during bridge improvements from an area along Abita Creek.

The Nature Conservancy (TNC), The U.S. Fish and Wildlife Service, Mercer Arboretum and the Louisiana Department of Transportation and Development (DOTD) partnered with LNHP to transplant approximately 600 quillworts. A few of the plants were placed along a portion of Abita Creek on the Shalimar Farms Natural Area. Landowners, Diana and Arthur Christensen, were happy to help with the project when contacted by LNHP staff, and participated by helping to select transplant locations along their portion of Abita Creek.



In 2001, LNHP removed 70 quillworts from an Abita Creek bridge in anticipation of Louisiana DOTD bridge projects. Mercer Arboretum in Houston provided a temporary "home" for the quillworts until the bridge project was finished.

"We moved the quillworts because bridge construction and possible subsequent siltation threatened the plants in the immediate vicinity of the bridge," said Patricia Faulkner, LNHP ecologist. "However, the bridge project was delayed several years and in that time the original 70 plants grew to over 600 individual quillworts." Chris Reid, pictured above, and Judy Jones, pictured at top right, planting one of 600 quillworts along stream bank in picture.



The only other states where quillworts exist include Alabama and Mississippi, and in Louisiana they are only found in Washington and St. Tammany parishes in the eastern part of the state. See fact sheet [isoetes_louisianensis.pdf](#) at

<http://www.wlf.louisiana.gov/pdfs/experience/naturalheritage/rareplant/> for more information. They are typically found growing in small blackwater streams such as Abita Creek on sand, gravel or mud bars and low stream banks. Quillworts are generally evident from winter through spring and are dormant during dry late summer and fall months, but can remain evident during these months if rainfall continues. Anthropogenic alterations of stream habitat such as channelization, siltation, contamination by non-point source pollution, and use of off-road vehicles, all threaten the continued survival of the LA quillwort.

"Natural Heritage, along with TNC, will monitor the transplants, and if successful, we hope to have another planting with the remaining quillworts," said Faulkner. "We could not have done this without the generous cooperation from all of our partners including the Christensens. We look forward to another successful quillwort transplant in the future as we try to save this native Louisiana plant." ❁



LA Wildlife Commission Accepts Notice of Intent for Natural Areas Registry

The Louisiana Wildlife and Fisheries Commission accepted a notice of intent that would allow the Louisiana Department of Wildlife and Fisheries (LDWF) to provide the option of dedication and servitude agreements for landowners in the department's Natural Areas Registry. The commission took the action at their Nov. 6 meeting.

The Natural Areas Registry was established by the Louisiana legislature in 1987 in an effort to identify and preserve species of conservation concern and the lands on which they occur. Currently, landowner agreements are informal, non-binding contracts. Under the proposed rule change, landowners who volunteer for the program would also have the option to dedicate a property to LDWF either by sale or donation, or may enter into a conservation servitude which transfers some property rights to the department while the landowner retains ownership of the property.

How does this benefit the landowner? Through a conservation servitude or dedication, a landowner can permanently protect their land and the natural heritage

values of the property. In addition, landowners may then be eligible for tax savings.

The Louisiana Natural Areas Registry currently includes 108 properties consisting of 46,265 acres statewide. The majority of registered properties belong to individual landowners. The many rare and endangered species that benefit from the program include animals like the red-cockaded woodpecker, gopher tortoise, and plants such as Texas trillium and parrot pitcherplant. More information is available on the program at www.wlf.louisiana.gov/experience/naturalheritage/naturalareasregistry. To view this notice of intent, visit www.wlf.louisiana.gov/pdfs/education/NatlAreaRulesandRegs+1108.pdf.

The commission will accept public comment on the notice received before 4:30 p.m. on Jan. 6, 2009. Comments should be directed to Patricia Faulkner, Natural Heritage Program, Louisiana Department of Wildlife and Fisheries, P.O. Box 98000, Baton Rouge, LA 70898. For more information, contact Patricia Faulkner at pfaulkner@wlf.louisiana.gov or 225-765-2975. ❁

Western Xeric Sandhill Woodland

Three Natural Areas Registries occur in this community type

Rarity Rank: S2S3 (S1 - Florida Parishes) / G2G3
Louisiana: S1=critically imperiled, S2=imperiled, S3=rare
Global: G1=critically imperiled, G2=imperiled, G3=rare

Synonyms: Oak-Farkleberry Sandy Lands

Ecological Systems:

CES203.056 West Gulf Coastal Plain Sandhill Oak and Shortleaf Pine Forest and Woodland

General Description:

- ◆ Developed on deep Tertiary marine sands that began forming 65 million years ago and lasted to 1.8 million years ago, particularly of the Sparta formation in northwest Louisiana and also on Pleistocene stream terraces that began forming 1.8 million to ~ 10,000 years ago. Sparta formation consists primarily of loose unconsolidated fine to coarse, light colored sand lenses intermingled with light colored clays (white, yellow, salmon, red). In places where the formation has enough depth, good to fair quality water can be found in useful quantities. The Sparta varies in thickness up to 280 feet thick where present, but is seldom deeper than 120 feet.
- ◆ Soil is nutrient-poor and dries quickly creating xeric conditions that characterizes an extremely dry habitat.
- ◆ Trees are often stunted because of the extreme site conditions
- ◆ Fire is thought to be an important process in maintaining this community, however some woodlands may be isolated by landscape features which make them less subject to fire (e.g., nearly surrounded by a floodplain)
- ◆ May have the appearance of a scrubby shrub-woodland
- ◆ Small, natural openings may be scattered throughout



- ◆ Many state-rare species occur in this community type and these are shown in bright blue

Plant Community Associates

Common woody species include: *Pinus echinata* (shortleaf pine), *Pinus taeda* (loblolly pine), *Pinus palustris* (longleaf pine), *Quercus stellata* (post oak), *Q. incana* (bluejack oak), *Q. stellata* var. *margaretta* (sand post oak), *Q. marilandica* (blackjack oak) and *Q. hemispherica* (upland laurel oak)

Common shrub species include: *Asimina parviflora* (dwarf paw-paw), *Vaccinium arboreum* (winter huckleberry), *Bumelia lanuginosa* (chittum-wood), *Ilex vomitoria* (yaupon), *Chionanthus virginicus* (fringe-tree), *Rhamnus caroliniana* (Indian cherry), *Stillingia sylvatica* (stillingia), *Hamamelis virginiana* (witch-hazel), and *Rhus aromatica* (aromatic sumac)

Characteristic herbaceous species include: *Opuntia humifusa* (prickly-pear cactus), *Andropogon* spp. (broomsedges), *Asclepias* spp. (milkweeds), *Aristida* spp. (three-awn grasses), *Smilax pumila* (sarsaparilla vine), *Cnidioscolous texana* (bull-nettles), *Tephrosia virginiana* (goat's-rue), *Zornia bracteata* (vipera), *Tradescantia reverchonii* (downy spider wort), *Polanisia erosa* (large clammy-weed), *Astragalus soxmaniorum* (soxman's milk-vetch), *Silene subciliata* (scarlet catchfly), *Streptanthus hyacinthoides* (smooth twistflower), *Prunus gracilis* (sandhill plum), *Penstemon murrayanus* (cupleaf beardtounge), *Eriogonum* spp. (wild buckwheats), *Tetragonotheca ludoviciana* (Louisiana square-head), and Foliose lichens (especially those in genera *Cladina* and *Cladonia*) may occur in profusion.



Astragalus soxmaniorum, Soxman's s milk-vetch

Federally-listed plant & animal species:

Picoides borealis (red-cockaded woodpecker), Endangered; G2; S2
Pituophis ruthveni (Louisiana pine snake), Candidate; G3Q; S2S3

Range: Western, northwest and northcentral Louisiana in portions of the Lower and Upper West Gulf Coastal Plains



Threats & Management Considerations: Presettlement extent of Western Xeric Sandhill Woodland habitat is estimated to have been 50,000 to 100,000 acres, with 10 to 25 % remaining today. Northern Caddo Parish is a "hotspot" for this habitat with a relatively high concentration of sandhill woodlands. However, most of the sandhill woodlands there are highly degraded. Much of this forest was converted to other forest types or lost to agriculture and development.

Other threats include construction of roads, pipelines or utilities, fire suppression, use of chemical herbicides or fertilizers, and introduction of invasive or exotic species.

Use of appropriate management activities and developing a compatible management plan prevents destruction or degradation of this habitat type and promotes long-term maintenance of healthy sandhill woodlands. Such management strategies should include:

- Prevent conversion of existing natural forests to other land uses
- Thin heavily stocked stands, targeting loblolly pine for removal and favoring shortleaf and longleaf pine as "leave" trees
- Use growing season prescribed fire (April-June) at a frequency of every 3 to 5 years
- Survey for and remove any invasive plant species (exotics or woody) with prescribed fire or use of spot herbicides or mechanical means 🌿

**WESTERN XERIC SANDHILL WOODLANDS
SPECIES OF CONSERVATION CONCERN (15)**

AMPHIBIANS	Loggerhead Shrike	MAMMALS
Strecker's Chorus	Prairie Warbler	Ringtail
Frog	Field Sparrow	REPTILES
BIRDS	BUTTERFLIES	Western Slender Glass
Northern Bobwhite	Wild Indigo	Lizard
American Woodcock	Duskywing	Southern Prairie Skink
Yellow-billed Cuckoo	Cobweb Skipper	Northern Scarlet Snake
Chuck-Will's-Widow		Louisiana Pine Snake

equip them admirably for their predominantly subterranean existence. Although ratlike in general appearance, they possess massive shoulders and arms, as well as heavily clawed forefeet that enable them to dig their underground burrows. Spacious, fur-lined cheek pouches lie wholly outside the mouth. The huge incisors are likewise mostly outside the mouth cavity. As would be expected in a rodent living in tunnels beneath the surface of the ground, the hair is extremely short, the eyes are tiny and beadlike, and the ears are inconspicuous with almost no pinnae. Compensating for their apparently poor senses of sight and hearing, pocket gophers possess exceptionally sensitive tactile organs. The nose and the short tail, which is virtually naked except for a few hairs at the base, are particularly sensitive to touch.

Description. These are medium to small sized gophers, 8 to 10 inches in total length, and males are larger than females. The genus *Geomys* is easily distinguished by the two longitudinal grooves on each of the upper incisors, which along with the two lower incisors, lie outside the mouth. *G. b. breviceps* is slightly larger than *G. b. sagittalis*. Individuals vary greatly in color from a light brown to nearly black, however, most individuals of *G. b. breviceps* have a melanistic coat color not common in other subspecies.

Habits. This pocket gopher typically inhabits sandy soils where the topsoil is 10 cm or more in depth. Clayey soils are usually avoided. These gophers live most of their solitary lives in underground burrows, coming to the surface only to throw out earth removed in their tunneling and to forage for some items of food. They seldom travel far overland. The average diameter of 40 burrows examined in Texas was nearly 6 cm; the average depth below the surface, 14 cm, with extremes of 10 cm and 67.5 cm. Much of their burrowing is done in search of food. The underground galleries attain labyrinthine proportions in many instances because the tunnels meander aimlessly through the feeding areas. This is particularly noticeable under oak trees that have dropped a good crop of acorns. Burrows have been examined that extend well over 100 m, excluding the numerous short side branches. Only one adult gopher normally occupies a single burrow system.

The average mound thrown up by these gophers is about 30 by 45 cm, about 8 cm in height, and crescentic in outline. The opening through which the earth is pushed is usually plugged from within. The gopher digs with its front claws and protruding teeth, shoves the loose earth ahead of it with its chin and forefeet, and uses the hind feet for propulsion. The ceaseless energy of these subterranean miners is suggested by the size of the huge winter mounds they make in sites that have poor underground drainage. One of these was 2 m long, 1.5 m wide, 60 cm high, and weighed an estimated 360 kg. The female that occupied this mound weighed 150 g. A typical winter mound contains numerous galleries, a nest chamber, a toilet, and food storage chambers. Pocket gophers are highly territorial and will vigorously defend their tunnels from intruders. There is typically one pocket gopher per tunnel system, unless the female has a litter if it is the mating season.

Louisiana Pocket Gopher
Order Rodentia: Family Geomyidae



The pocket gopher species *Geomys breviceps* is composed of two subspecies, *Geomys breviceps breviceps* and *Geomys breviceps sagittalis* that occur in Louisiana.

Distribution – *G. b. sagittalis* includes much

of Texas, Oklahoma, Arkansas, and Louisiana, whereas *G. b. breviceps* is restricted to a small, geographically isolated population in northeastern Louisiana near the town of Mer Rouge. The Ouachita River Basin separates these two subspecies.

The name most frequently heard applied to this species in Louisiana is "salamander" and this term may have derived from "sandy mounder" that was originally used to describe this gopher. The term pocket refers to the fur-lined cheek pouches that the gopher uses to carry food. The old wives' tale that it carries soil from the burrow in these pouches is false. The lips close behind the protruding chisel-like front teeth so the gopher can chew through dense soil or large roots without getting dirt in its mouth.

This family is exclusively North American. It contains eight genera, of which only one, *Geomys*, occurs in Louisiana. Pocket gophers are among the most highly specialized of all rodents. Their structural modifications



These rodents feed on a variety of plant items, chiefly roots and stems of weeds and grasses. Most plant food is encountered and ingested while the gopher digs, but some "grazing" of food present along burrow walls probably also occurs. The furlined cheek pouches are used to carry food and nesting material but never dirt. Captive gophers have eaten white grubs, small grasshoppers, beetle pupae, and crickets. Earthworms and raw beef were ignored.

Breeding begins in late January or early February in eastern Texas and continues for a period of some 3 or 4 months. One litter a year, or two in quick succession, appears to be the rule. The young, usually two or three in number, are born from March to July. The young are nearly naked, blind, and helpless at birth. They remain with their mother until nearly full-grown and then are evicted to lead an independent life.

As long as they remain in their burrows, pocket gophers are relatively safe from predators other than those which are specialized for digging, such as badgers and long-tailed weasels. However, when a gopher leaves its burrow it is highly vulnerable, and most predation losses probably occur on the surface. Known predators, other than those mentioned above, include coyotes, skunks, domestic cats, hawks, owls, and several kinds of snakes and are the major source of food for the Louisiana pine snake. As a result of the protection offered by the burrow, pocket gophers are long-lived relative to many other rodents, insectivores, and lagomorphs (rabbits, hares), living an average of 1-2 years in the wild.

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Lowery, Jr. George H. 1974. The Mammals of Louisiana and its Adjacent Waters. Louisiana State University Press.

Demastes, James W. Sept 1994. Systematics and zoogeography of the Mer Rouge pocket gopher (*Geomys breviceps breviceps*) based on cytochrome-*b* sequences. The Southwestern Naturalist 39(3):276-280. <http://www.jstor.org/pss/3671593>

LOUISIANA PINE SNAKE

Pituophis ruthveni

The Louisiana pine snake is a non-venomous constrictor of the Colubridae family. It is large, usually 4-5 feet long; the largest reported specimen was 5.8 feet long. One-year old and two-year-old snakes may reach 2-3 feet and 3-4 feet in total length, respectively. Sexual maturity may be attained at a minimal total length of 4 feet and an age of at least three years. The species is oviparous, with a gestation period of about 21 days, followed by 60 days of incubation. This species exhibits a remarkably low reproductive rate, with the smallest clutch size (3-5) of any North American colubrid snake and the largest eggs of any U.S. snake, generally 5 inches long and 2 inches wide. It also produces the largest hatchlings reported for any North American snake, ranging 18-22 inches in length, and up to



Photo by Dan Saenz

107 grams in weight. This low fecundity magnifies other threats to the pine snake; species with such low reproductive rates are typically incapable of quickly recovering from events that affect population size, increasing their potential for local extirpations.

In studies in east Texas and west Louisiana, pine snakes spent at least 59% of their time below-ground, exhibiting only short-range movements of 10-20 feet. They were most active late-morning and mid-afternoon, and least active at night and early morning.

Above-ground snakes usually moved underground at least once during the day, possibly for foraging, body cooling, or predator avoidance. Seasonally, Louisiana pine snakes were most active March-May and fall (especially November) and least active during hibernation in December-February, and in summer (especially August). Their below-ground refuges were almost exclusively pocket gopher burrow systems. Pocket gophers appear to be their primary food source, but other reported food items include other rodents, cottontails, amphibians, and ground-nesting birds and eggs.

Their annual home range varied from 12 acres (juveniles) to 195 acres in size, and averaged 69 acres. Adult males had larger home ranges (145 ac) than females (25 ac).

Pine snakes in east Texas usually moved less than 33 feet daily. However, when snakes did move longer distances, usually from one pocket gopher burrow system to a new one, the average daily distance moved was 669 feet for adult females and 568 feet for adult males; in Louisiana, males moved an average of 492 feet, and females 344 feet. Males tended to make long moves in May-July, while females moved primarily in July-September. There was no indication of seasonal migration.

HABITAT: The Louisiana pine snake is generally associated with sandy, well-drained soils; open pine forests, especially longleaf pine savannah; moderate to sparse midstory; and a well-developed herbaceous understory dominated by grasses. Its activity appears to be heavily concentrated on low, broad ridges overlain with sandy soils.

Pocket gophers (*Geomys sagittalis*) appear to be an essential component of Louisiana pine snake habitat. They create the burrow systems in which the pine snakes are most frequently found, and serve as a major source of food for the species. Up to 90% of radio-tagged snake relocations have been underground in pocket gopher burrow systems, and movement patterns are typically from one pocket gopher burrow system to another. Snakes disturbed on the surface retreated to nearby burrows, and hibernation sites were always within burrows. Both native and captive-released snakes were found most frequently in areas containing an ample number of pocket gopher mounds, and snakes stayed active longer and moved greater distances where pocket gopher burrows were abundant.

STATUS AND DISTRIBUTION: Louisiana pine snakes originally occurred in at least 9 Louisiana parishes and 14 Texas counties, coinciding with a disjunct portion of the



Photo by Mike Monlezun
LA Pine Snake eggs (left) and black rat snake eggs (right)

longleaf pine ecosystem west of the Mississippi River. They are now found in only 4 Louisiana parishes and 5 Texas counties. In Texas, records confirm their presence only in the southern portion of Sabine National Forest (Sabine County) and adjacent private land (Newton County), and in the southern portion of Angelina National Forest (Angelina, Jasper, Tyler counties). Nearly all recent records are from two separate areas, each measuring less than 4 miles in radius, and a third site (Scrappin Valley) managed by Temple-Inland Corporation in northern Newton County.

Most Louisiana records originate in Bienville Parish on privately owned forestland. A second population occurs on Federal lands in Vernon Parish (Fort Polk, U.S. Army, and Kisatchie National Forest). An apparently third population has been found near the juncture of Vernon, Sabine and Natchitoches parishes.

Studies suggest that extensive population declines and local extirpations of the Louisiana pine snake have occurred during the last 50-80 years. A habitat assessment of known historical localities found that only 34% were still considered capable of supporting a viable population of pine snakes. The species has not been documented in over a decade in some of the best remaining habitat within its historical range, suggesting extinction or extreme rarity. It is now recognized as one of the rarest snakes in North America, and one of the rarest vertebrate species in the United States.

Threats: Urban development, conversion to agriculture, road construction, and mining has all contributed to loss and fragmentation of pine snake habitat. Direct human predation and collection for the pet trade may have also impacted populations. However, the greatest impact to Louisiana pine snakes has been loss of the native longleaf and shortleaf-pine ecosystem.

Loss of native pine savannah: Virtually all timber in the South was cut during intensive commercial logging from 1870 to 1920. In 1935, only 3% of remaining longleaf-pine forests in Louisiana and Texas existed as uncut, old-growth stands. In the 1980's, only 15% in Louisiana and 7% in Texas of the 1935 levels of natural longleaf-pine forest still remained. The majority of this historic longleaf and shortleaf-pine savannah forests has been replaced with plantations of fast-growing loblolly and slash pine. These commercial plantations are typically grown in very dense, closed-canopy stands that are harvested on short rotations of less than 40 years. These forests have sparse and poorly structured understory plant communities, rendering them uninhabitable for pocket gophers.

Fire suppression: Any remaining pine habitat occurs in isolated blocks and is often degraded by the lack of periodic fires. The suppression of natural fire events may represent the greatest threat to the Louisiana pine snake in recent years, decreasing both the quantity and quality of habitat available to pine snakes. The longleaf-pine savannah forest evolved as a fire-climax community, adapted to the occurrence of frequent, but low-intensity, ground fires. These natural fire events on sandy, well-drained soils typically maintained an overstory dominated by longleaf-pine, with minimal midstory cover but a well-developed understory of native bunch-grasses and herbaceous plants. These park like forests supported ideal habitat for pocket gophers and, subsequently, pine snakes. In the absence of periodic fires, these upland pine savannah ecosystems rapidly develop a dense mid-story which suppresses or eliminates any herbaceous understory.

Since the presence of pocket gophers is directly related to the extent of herbaceous vegetation available to them, their population numbers and distribution declines as such vegetation declines. No pine snakes have been captured in areas substantially degraded by fire suppression.

Observations indicate that pine snakes are well adapted to fire. Above-ground snakes quickly move into pocket gopher burrows as flames come near. Nine pine snakes residing in areas subjected to prescribed burns over three years time all survived with no damage.

Vehicle mortality: Louisiana pine snakes are also impacted by vehicle-caused mortality, both on state roads and on off-road trails. Researchers documented the loss of 3 snakes to vehicle traffic, including off-road vehicles. Further research indicated that roads with moderate to high traffic levels can reduce populations of large snakes by 50-75%, up to 2800 feet away. Known conflicts between pine snakes and motorized vehicles exist in sections of the Longleaf Ridge Area of Angelina National Forest. Motorized vehicles have eliminated a large part of the Millstead Branch bog community and the Catahoula Barrens community. In Sabine National Forest, vehicle conflicts occur on Foxhunter=s Hill and the Stark Tract.

RECOVERY MEASURES: In March of 2004, a Candidate Conservation Agreement was developed and approved in order to identify and establish management protection for the pine snake on Federal land by protecting known populations and habitat, reducing threats to its survival, maintaining its ecosystem, and restoring degraded habitat. This agreement was intended to establish a framework for cooperation and participation in the pine snake=s protection, conservation, and management within the boundaries of the Angelina and Sabine National Forests of Texas, Kisatchie National Forest in Louisiana, and Fort Polk Military Reservation in Louisiana. This agreement was implemented by the U.S.D.A. Forest Service; Fort Polk, U.S. Army, Department of Defense (Fort Polk); Region 2 and 4 of the U.S. Fish and Wildlife Service; Texas Parks and Wildlife Department; and Louisiana Department of Wildlife and Fisheries. Restoration measures will include prescribed burning, thinning, and replanting of long-leaf pine forest.

References:

<http://www.fws.gov/southwest/clearlakees/PDF/PINESNAKE.pdf> 🌱

LNHP at Natural Areas Conference

by Judy Jones

Patti Faulkner and I attended the 35th Natural Areas Conference in Nashville, Tennessee recently in October 2008. We are members of the Natural Areas Association (NAA) and they were partnering with the National Association of Exotic Pest Plant Councils (NAEPPC) and the Tennessee Department of Environment and Conservation to host this conference. Natural Areas Revival in Music City: Tuning into a Changing Climate and Biological Invasion was this year's conference theme. We attended the State Natural Areas Programs Roundtable led by Karen Smith, Director of Arkansas Natural Heritage Commission where we met representatives from other states Natural Areas programs and discussed challenges, recent successes and innovations, and the status of our Natural Areas Programs. Patti presented the Importance of Natural Areas as Research Sites during the conference that concentrated on selling a Natural Areas Program. Additionally, we attended a Native Grass ID workshop to two of Tennessee's highest-quality grasslands, Flatrock Cedar Glades and Barrens State Natural Area, led by Dr. Dwayne Estes from Austin Peay State University in Tennessee. Dwayne helped Patti and Chris Reid with plant identification in the past on their saline prairie research project.

Photo from the front page are eggs of a **Chuck-Will's-Widow**

(*Caprimulgus carolinensis*), the largest nightjar in North America. Photo by John Schwarz. Two creamy-white eggs, with purple and brown markings, are laid on



bare ground or dead leaves in spring. Chuck-wills-widow is significantly larger at 12" and longer tailed than the Whip-poor-will, is overall a rich brown rather than gray, and has a buff (rather than black) throat. Males have white in their tail while females do not. They are named after its continuous, repetitive song that is often heard at night with the first "chuck" being quiet and inaudible at a distance and with an accent on the third syllable. They hunt by flying low over the ground in search of insects and have occasionally taken small birds and bats that they can swallow whole. Chuck-wills-widows summer in the southeastern quarter of the United States and winters in Mexico, Central America, and northern South America, with some over-wintering in Florida.

For further interesting reading see

http://www.audubon.org/bird/boa/F4_G1a.html

Previous Newsletter, September 2008, Vol. 6, No 1 of 4. We recognized three new Natural Areas Registries that encompass 660 acres. We covered the Emergency Watershed Protection Program (EWP), Western Hillside Seepage Bogs, Red-devil Crawfish, Pitcher Plant, Sundews, and Cecropia moth.

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